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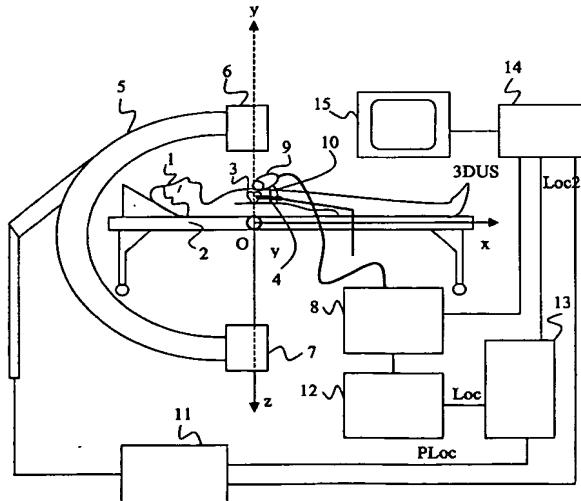
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**(54) Title: SYSTEM FOR GUIDING A MEDICAL INSTRUMENT IN A PATIENT BODY**



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**(57) Abstract:** The present invention relates to a medical system comprising a medical instrument to be guided in a patient body, means for acquiring a 2D X-ray image of said medical instrument, means for acquiring a 3D ultrasound data set of said medical instrument using an ultrasound probe, means for localizing said ultrasound probe in a referential of said X-ray acquisition means, means for selecting a region of interest around said medical instrument within the 3D ultrasound data set, that define a first localization of said region of interest in a referential of the ultrasound acquisition means, means for converting said first localization into a second localization in said referential of the X-ray acquisition means and means for generating a bimodal representation of said medical instrument detection by combining said 2D X-ray image and the 3D ultrasound data included in said region of interest.

**Declaration under Rule 4.17:**

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM,*

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